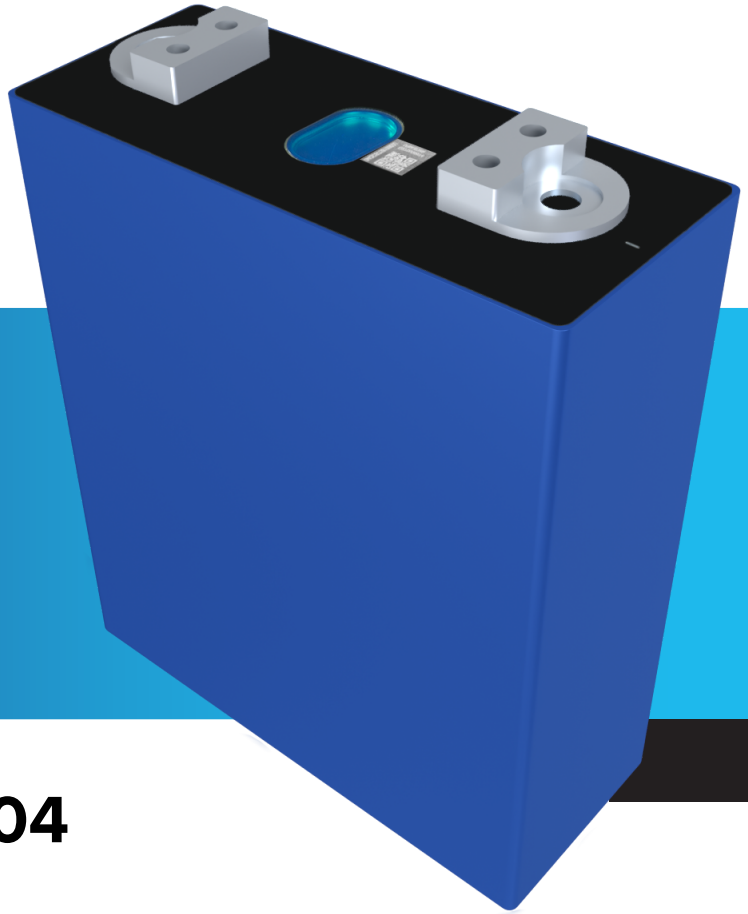
EXPERTPOWER®
WWW.EXPERTPOWER.US

3.2V 304Ah LiFePO4

PRISMATIC CELL SPECIFICATION



MODEL: LC32304

Contents

Term Definition

Environment temperature: The ambient temperature where the cell is located.

Cell temperature: The temperature measured by temperature sensor installed at the center of cell surface.

Normal capacity: The minimum capacity that the cell can discharge under the specified discharge conditions which is indicated by the letter Q.

Fresh battery: Refers to the state of the battery within 7 days from the date of manufacture of the product.

Charging Rate: The ratio between the charging current and the capacity which measured by the battery management system for many times. For example, when the cell capacity is 304Ah and the charging current is 152 A, the charging rate is 0.5 C. When the cell capacity drops to 280 Ah and the charging current is 140 A, the chargin rate is 0.5 C.

State of charge: Under unloaded conditions, the ratio of the cell capacity state which measured in ampere-hour or watthour to the rated capacity. The abbreviation is expressed by SOC. For example, if the capacity is 304 Ah which considered as 100% SOC, the capacity is 0 Ah, considered as 0% SOC.

Cycle: The battery is charged and discharged once as a cycle according to the specified charging and discharging standards. The battery shall be charged and discharged once according to the specified charging and discharging standards as a cycle. The cycle includes short-term normal charging or a combination of regenerative charging and discharging processes. In the charging process, sometimes there is only normal charging and no regenerative charging. The discharge can be formed by combining some partial discharges.

Open circuit voltage: Terminal voltage of the cell under open circuit conditions. The abbreviation is expressed by OCV.

AC resistance: Inject 1kHz sine wave current into the positive and negative poles of the cell, and the internal resistance obtained, which abbreviated as ACR.

DC resistance: The ratio of the voltage change to the corresponding current change under working conditions, the abbreviation is DCR.

Module: A combination in which more than one cell is combined in series, parallel or series parallel mixed connection and used as a power supply.

Pulse current: The current or voltage pulses that appear periodically are called pulse currents. The pulse currents appear either in the same direction or in alternating positive and negative directions.

Compression force: When the module is assembled, the cell bears the force perpendicular to the cell stacking direction.

Units of measurement: Refer to following table.

Table 1 Units of measurement

NO.	Unit	Abbreviation	Type of units
1	Volt	V	Voltage
2	Ampere	A	Current
3	Ampere-Hour	Ah	Capacity
4	Watt-Hour	Wh	Energy
5	Ohm	Ω	Resistance
6	Milliohm	mΩ	Resistance
7	Degree Celsius	℃	Temperature
8	Millimeter	mm	Length
9	Second	s	Time
10	Minute	min	Time
11	Hour	h	Time
12	Hertz	Hz	Frequency

1. Fundamental Information

1.1. Scope of Application

This specification is applied to 304 Ah lithium-ion cell with prismatic aluminum shell manufactured by ExpertPower.

1.2. Product Type

Prismatic lithium-ion cell with aluminum shell

1.3. Product Model

LC32304

2. Cell Specification

2.1.Fundamental Parameters

Table 2 Units of measurement

Items	Standards	Remarks
Min. Capacity	304.0 Ah	0.5 C / 0.5 C 25℃ ± 2℃ 2.5 V ~ 3.65 V, Fresh battery
Initial IR	0.16 mΩ ± 0.05 mΩ	AC 1 kHz 30% ~ 40% SOC, Fresh battery
Nominal Voltage	3.2 V	0.5 C discharge, 25℃ ± 2℃, 2.5 V ~ 3.65 V
Weight	5450 g ± 164 g	/
Charging Cut-off Voltage (Umax)	3.65 V	/
Discharging Cut off Voltage (U min)	2.5 V (T > 0℃) 2.0 V (T ≤ 0℃C0)	/
Maximum Instantaneous Discharging Current	3 C	60 s ≥ 30% SOC 25℃ ± 2℃
Maximum Instantaneous Charging Current	2 C	60 s ≤ 80% SOC 25℃ ± 2℃
Grouping Initial Preload (N)	3000 N	It can bear 7000 N within 2 min
Cell Voltage Insulation	≤ 10.5 mA	Force 300 kg ± 20 kg, Voltage 1500 V ~ 1550 V, Time 1 s ~ 2 s; Leakage Current ≤ 10.5 mA

Room Temperature Self-discharge Rate		≤ 2 % / month	50% SOC, 25℃, Fresh battery
High Temperature Self-discharge Rate		≤ 3 % / month	50% SOC, 45℃, Fresh battery
Standard Charging Current		152.0 A	0.5 C
Standard Discharging Current		152.0 A	0.5 C
Cycling Performance	25℃ Cycle	4000 Cycles	Under 300 kg ± 20 kg initial compression force, 0.5 C / 0.5 C, 2.5 V ~ 3.65 V, Capacity retention≥80%
	45℃ Cycle	2000 Cycles	
Operation Temperature	Charging Temperature	0℃ ~ 65℃	/
	Discharging Temperature	-35℃ ~ 65℃	/
Storage Temperature	3 months	0℃ ~ 35℃	Delivery SoC State
	1 month	-20℃~45℃	

Welding Parameter of Al Busbar	Laser Welding Depth	≤ 2.0 mm	/
	Max Pressure on Poles	700 N	Max force in longitudinal direction, no deformation.
	Max Torque on Poles	6 N·m	Max torsion, non-loosen.
	Max Temperature on Poles	130℃	The maximum temperature that the pole bears when the plastic pad will not deform.

2.2. Product Parameters

2.2.1. Dimension and Weight

Table 3 Cell size and weight parameters

No.	Item		Standard
1	Dimension	Height to terminals	207.20 mm ± 0.50 mm
		Can-top Height	204.40 mm ± 0.50 mm
		Length	173.70 mm ± 0.50 mm
		Thickness	71.70mm ± 0.8 0 mm 300 kgf ± 20 kgf compression force, 30% ~ 40% SOC)
		Distance between poles	123.00 mm ± 0.30 mm

2	Weight	Weight (Including external protective film, top insulator and bottom insulator)	5450 g ± 164 g

2.2.2. Electrical Performance Parameters

Table 4 Cell electrical performance parameters

No.	Item		Standards
1	Capacity	0.5 C / 0.5 C Capacity, Fresh battery	≥ 304.0 Ah
2	Energy	0.5 C / 0.5 C Energy, Fresh battery	≥ 972.8 Wh
3	Discharge Rate Performance	-20℃ Capacity Retention Rate, Fresh battery	≥ 75%
		0℃ Capacity Retention Rate, Fresh battery	≥ 85%
		25℃ Capacity Retention Rate, Fresh battery	100%
		45℃ Capacity Retention Rate, Fresh battery	≥ 97%

		55℃ Capacity Retention Rate, Fresh battery	≥ 97%
4	DCR	25℃ 50% SOC 1 C, 10 s Fresh battery	≤ 1.2 mΩ
5	Cycle	With 300 kgf ± 20 kgf initial compression force, 25℃ ± 2℃ @ 0.5 C / 0.5 C cycle, or follow the ExpertPower recommended cycling method	4000 cycles, Capacity Retention ≥ 80%
		With 300 kgf ± 20 kgf initial compression force, 45℃ ± 2℃ @ 0.5 C / 0.5 C cycle, or follow the ExpertPower recommended cycling method	2000 cycles, Capacity Retention ≥ 80%
6	Storage	25℃, 28 days, Fresh battery, 50% SOC	Capacity Recovery ≥ 98%
		45℃, 28 days, Fresh battery, 50% SOC	Capacity Recovery ≥ 97%

2.2.3. Safety Performance parameters

Table 5 Cell safety performance parameters

No.	Standard	Standard
1	Over Discharge	No fire, No explosion
2	Over Charge	No fire, No explosion
3	External Short-circuit	No fire, No explosion
4	Heating	No fire, No explosion
5	Temperature Cycling	No fire, No explosion
6	Extrusion Test	No fire, No explosion

2.3 Cell Drawing

See Fig.2.

3. Charge and Discharge Parameters

The following data is the reference performance data of LC32304 cell for reference during BMS design. Actual use is subject to the use mode and conditions agreed by both parties.

3.1. Charge Mode

Table 6 Charging mode parameter table

Parameters	Product specifications	Remarks
Standard charging current	0.5 C	25℃ ± 2℃
Maximum continuous charging current	1 C	
Standard charging cut-off voltage	Single cell ≤ 3.65 V	

Standard charging temperature	25℃ ± 2℃	
Absolute charging temperature (cell temperature)	0℃ ~ 65℃	No matter what charging mode the cell is in, once the cell temperature exceeds the absolute charging temperature range, charging will stop
Absolute charging voltage	Max 3.65 V	No matter what charging mode the cell is in, once the cell voltage exceeds the absolute charging voltage, the charging will stop

3.2. Other Charging Mode

Table 7 Continuous charging modes / C-cell level (unit: C-Rate)

T / SOC	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	100%
0℃	0	0	0	0	0	0	0	0	0	0	0	0	0
10℃	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.12	0.12	0
25℃	1	1	1	1	1	1	1	1	1	0.8	0.5	0.5	0
45℃	1	1	1	1	1	1	1	1	1	0.8	0.5	0.5	0
55℃	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0
65℃	0	0	0	0	0	0	0	0	0	0	0	0	0

3.3. Discharge Mode

Table 8 Discharge mode parameter table

Parameters	Product specifications	Remarks
Standard discharge current	0.5 C	25℃ ± 2℃
Maximum continuous discharge current	1 C	
Discharge cut-off voltage	2.5 V	Temperature T > 0℃
	2.0 V	Temperature T ≤ 0℃
Standard discharge temperature	25℃ ± 2℃	
Absolute discharge temperature (cell temperature)	-35℃ ~ 65℃	No matter what discharge mode the cell is in, once the cell temperature exceeds the absolute discharge temperature range, the discharging will stop
Absolute discharge voltage	Min 2.5 V (T > 0℃) Min 2.0 V (T ≤ 0℃)	No matter what kind of discharge mode the cell is in, once the cell voltage is less than the absolute discharge voltage, thedischarging will stop

3.4. Other Discharging Mode

Table 9 Continuous discharge rate / C-cell level (unit: C-Rate)

T / SOC	0%	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	100%
-36℃	0	0	0	0	0	0	0	0	0	0	0	0	0
-35℃	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
-20℃	0	0.06	0.12	0.25	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

0℃	0	0.25	0.5	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
25℃	0	0.38	0.75	1	1	1	1	1	1	1	1	1	1
45℃	0	0.38	0.75	1	1	1	1	1	1	1	1	1	1
55℃	0	0.38	0.75	1	1	1	1	1	1	1	1	1	1
65℃	0	0	0	0	0	0	0	0	0	0	0	0	0

3.5. Pulsing Mode

3.5.1. Pulsing Discharging Mode

Table 10 30s pulse discharge rate / C-cell level (unit: C-Rate)

T\SOC	0%	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	100%
-36℃	0	0	0	0	0	0	0	0	0	0	0	0	0
-35℃	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
-30℃	0	0.03	0.06	0.12	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
-25℃	0	0.06	0.12	0.25	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
-15℃	0	0.06	0.12	0.25	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
-10℃	0	0.12	0.25	0.62	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
-5℃	0	0.25	0.5	1	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
0℃	0	0.28	0.56	1.06	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18
5℃	0	0.31	0.62	1.12	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
10℃	0	0.33	0.66	1.22	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43
15℃	0	0.34	0.68	1.32	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63
20℃	0	0.36	0.72	1.41	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82
25℃	0	0.38	0.75	1.5	3	3	3	3	3	3	3	3	3
30℃	0	0.38	0.75	1.5	3	3	3	3	3	3	3	3	3
35℃	0	0.38	0.75	1.5	3	3	3	3	3	3	3	3	3
40℃	0	0.38	0.75	1.5	3	3	3	3	3	3	3	3	3
45℃	0	0.38	0.75	1.5	3	3	3	3	3	3	3	3	3
50℃	0	0.38	0.75	1.5	3	3	3	3	3	3	3	3	3
55℃	0	0.38	0.75	1.5	3	3	3	3	3	3	3	3	3
60℃	0	0.38	0.75	1.5	3	3	3	3	3	3	3	3	3
65℃	0	0	0	0	0	0	0	0	0	0	0	0	0

3.5.2. Pulsing Feedback Mode

Table 11 30s pulse feedback rate / C-cell level (unit: C-Rate)

T\SOC	0%	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	100%
0℃	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5℃	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.25	0.25	0.25	0
10℃	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.4	0.25	0.25	0
15℃	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.6	0.4	0.4	0
20℃	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.8	0.4	0.4	0
25℃	2	2	2	2	2	2	2	2	2	2	1.6	0.8	0.8	0
30℃	2	2	2	2	2	2	2	2	2	2	1.6	0.8	0.8	0
35℃	2	2	2	2	2	2	2	2	2	2	1.6	0.8	0.8	0
40℃	2	2	2	2	2	2	2	2	2	2	1.6	0.8	0.8	0
45℃	2	2	2	2	2	2	2	2	2	2	1.6	0.8	0.8	0
50℃	2	2	2	2	2	2	2	2	2	2	1.6	0.8	0.8	0
55℃	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	0.8	0.8	0
60℃	0	0	0	0	0	0	0	0	0	0	0	0	0	0

4. Safety Limits

4.1. Application Conditions

The customer shall ensure strict compliance with the following battery application conditions:

a) The customer shall configure a battery management and monitoring system to strictly monitor, manage and protect each cell.

b) The customer shall establish battery management archives for tracing problems.

c) The customer shall keep complete monitoring data of battery operation for reference of product quality responsibility division. ExpertPower is not responsible for product quality assurance if it does not have complete monitoring data of the battery system during its service life.

d) Water and dustproofing must be considering in the design of the battery pack and may have to meet local laws or regulations depending on jurisdiction. ExpertPower is not responsible for the damage (such as corrosion, rust, etc.) of the cells caused by lack of water or dustrproofing.

e) It is forbidden to mix different types of cells in the same battery system (or vehicle), otherwise, ExpertPower will not be responsible for quality assurance.

4.2. Voltage Limits

Table 12 Safety limit voltage parameters

Item	Category	Parameters	Protective Action
Charging Voltage	Charging Ends	3.65 V	When the battery voltage reaches 3.65 V, stop charging.
	First Over-Charging Protection	3.80 V	When the battery voltage reaches 3.8 V, stop charging.
	Second Over-Charging Protection	3.85 V	When the battery voltage reaches 3.85 V, stop charging and lock the battery management system until the technician solves the problem.
Discharging Voltage	Discharging Ends	Min 2.50 V	Temperature T > 0℃. When the battery voltage reaches 2.5 V, reduce the current to the minimum.

		Min 2.00 V	Temperature T ≤0°C0°C. When the battery voltage reaches 2.0 V, reduce the current to the minimum.
	First Over-Discharging Protection	Min 2.00 V	Temperature T >0°C When the battery voltage reaches 2.0 V, reduce the current to the minimum.
		Min 1.90 V	Temperature T ≤0°C0°C. When the battery voltage reaches 1.9 V, reduce the current to the mi nimum.
	Second Over-Discharging Protection	Min 1.85 V	Temperature T >0°C When the battery voltage is lower than 1.85 V, stop charging and lock the battery management system until technician review..
		Min 1.75 V	Temperature T ≤ 0°C. When the battery voltage is lower than 1.75 V, stop charging and lock the battery management system until technician review.
BMS protection	Short circuit protection	Short circuit is not allowed	When a short circuit occurs, the cell is disconnected by the overcurrent device

	Long charging time Protection	Charging time within 8 h	If the charging time is longer than 8 h, the charging will be terminated

Remark:

a) Charging protection and discharging protection are warning clauses. Customers are advised to pay attention: when the battery reaches any of the indicators and parameters described in the above clauses, it means that the battery has exceeded the conditions of use specified in this specification. Customers should take protective measures for the battery based on "protective actions" and other relevant provisions in this specification. At the same time, ExpertPower declares that no warranty responsibility is assumed for batteries used under the above conditions, and no compensation will be made for any losses incurred by customers or third parties as a result.

b) It is important to avoid the battery reaching a deeply discharged state. When the battery voltage drops below 1.85V/1.75V, the internal components of the battery may be permanently damaged, and in such cases, ExpertPower's product quality warranty is void. When the discharge cut-off voltage is below 2.5V/2.0V, the system's internal energy consumption is minimized, and it extends the standby time before recharging. Customers need to train users to recharge the battery in the shortest possible time to prevent the battery from entering a deeply discharged state.

4.3. Temperature Limits

Table 13 Safety limit temperature parameters

Item	Value	Remarks
Recommended Operating Temperature Range	10℃ ~ 35℃	Recommend cell usage temperature range.

Maximum operating temperature	60℃	If the cell temperature exceeds the maximum operating temperature, the power needs to be reduced to 0.
Minimum operating temperature	-35℃	If the cell temperature exceeds the minimum operating temperature, the power needs to be reduced to 0.
Maximum safe temperature	65℃	If the cell temperature exceeds the maximum safe temperature, it will cause irreversible and permanent damage to the cell, and the user should not use it higher than the maximum safe temperature.
Minimum safe temperature	-35 ℃	If the cell temperature exceeds the minimum safe temperature, it will cause irreversible and permanent damage to the cell, and the user should not lower the minimum safe temperature when using it.

Remarks:

a) The battery should not be charged under low-temperature conditions prohibited by this specification (including but not limited to standard charging, fast charging, emergency charging, and regenerative charging). Otherwise, unexpected capacity reduction may occur. The battery management system should control the charging and regenerative charging temperature based on the minimum specified temperature. Charging below the temperature specified in this specification is prohibited. Otherwise, ExpertPower does not assume any quality warranty responsibility or any related liabilities for losses and compensation incurred as a result.

b) The heat dissipation of battery should be fully considered in the design of bof the battery pack, ExpertPower is not responsible for the quality assurance caused by overheating due to the heat dissipation design of battery pack.

5. Parameters Recommendation for Module Design

5.1. Recommended Temperature Collection Points

When collecting temperature data from the cell surface, it is advisable to position the temperature collection points at the center of the poles and the surface, as illustrated in the figure below.

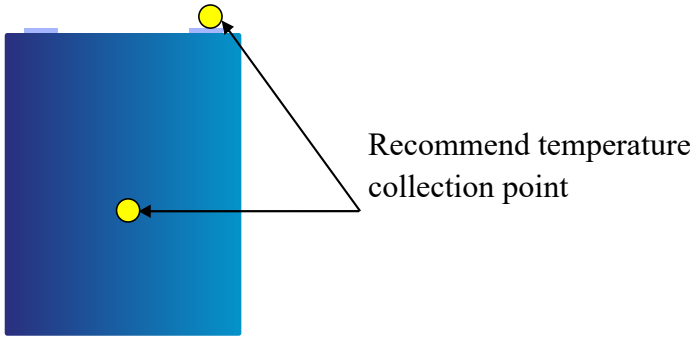


Fig.1 Schematic diagram of LC32304 cell temperature collection point

6. Cell Operation Instructions and Precautions

6.1. Product End-life Management

The lifespan of the cell is limited. To effectively monitor and record the internal resistance and capacity of each cell throughout its life, customers should establish a reliable tracking system. If the internal resistance of the cell in use exceeds 150% of its initial internal resistance or the capacity falls below 70% of the nominal capacity, the cell should not be operated. Failure to comply with this requirement will release ExpertPower from its responsibility for product quality assurance, as stipulated in the product sales agreement and this specification, and relieve ExpertPower of any related liabilities, including loss compensation.

6.2. Long-term Storage

After charging, it is recommended to utilize the cell promptly to prevent usable capacity loss due to self-discharge. If storage is necessary, the cell should be stored in a low state of charge (SOC). The recommended storage conditions are as follows: SOC of 30% to 40%, temperature of 0°C to 35°C, and relative humidity ≤ 60%.

6.3. Transportation and Handling Requirements

• During transportation, the cell must not be shipped together with flammable, explosive, or corrosive substances in the same vehicle. Stacking is prohibited during the transportation of large packages. The product should not be exposed to rain, snow, liquid substances, or mechanical damage.

• When loading and unloading products, lift trucks or specialized tools should be used for safe handling. Care should be taken to avoid throwing or squeezing the product, as this may cause battery damage or personal injury. It is strictly prohibited to store it together with corrosive substances such as acids and alkalis.

6.4. Operation Precautions

• Immersion of the cell in water is strictly prohibited. When not in use, the cell should be stored in a cool and dry environment.

• Usage and placement of the cell near hot and high-temperature sources, such as fire or heaters, are forbidden. The battery's temperature should not exceed 65℃ under normal use. If the temperature exceeds this limit, the battery management system must shut down the battery and cease its operation.

• Please use a dedicated charger for lithium-ion batteries during the charging process.

• Avoid overcharging the cell, as it may result in overheating and fire. Hardware and software protection against multiple overcharge failures must be ensured during cell installation and use. Refer to section 4.2 of this specification for the minimum protection requirements.

• When using the cell, strictly connect the positive and negative terminals as indicated by the labels and instructions, and never engage in reverse charging.

• Directly short-circuiting the positive and negative terminals of the cell using metal is strictly forbidden. Otherwise, it may lead to high temperatures, strong currents, personal injury, or fire. The cell should not be transported or stored together with metal objects such as hairpins or necklaces.

• Avoid knocking, throwing, stepping on, or bending the cell.

• Do not directly weld the cell or pierce it with nails or sharp objects. Take precautions to protect the battery from mechanical shock, collisions, and pressure, as internal short-circuits may occur, leading to high temperatures and fire.

• Do not use or place the battery in high-temperature environments, such as under direct sunlight. This may cause overheating, impaired functionality, and reduced service life of the battery.

• Avoid using the battery in locations with strong static electricity and strong magnetic fields, as this can damage the cell's safety protection device and pose potential risks.

• Normal charging should be terminated within 8 hours. Charging for an extended period may cause the battery to overheat, potentially leading to thermal runaway and fire. Install a timer for protection. Once the charging current reaches a certain overcharged state that cannot be terminated, the timer will activate and stop the charging process.

• Improper termination of charging may occur during the battery charging process, such as charging beyond the allowed time or when the charging voltage or current exceeds safe limits. This phenomenon is referred to as "inappropriate termination of charging." In such cases, it may indicate a battery system leakage or faulty components. Charging should not continue until the root cause is identified and resolved to prevent overheating or fire. The battery management system should use the automatic lock function to prohibit subsequent charging and notify the user to return the product with the battery to the dealer for system maintenance. Recharging can only be performed after a thorough inspection by a qualified technician to determine and resolve the root cause.

• Customers should securely fasten the battery to a solid surface and ensure the power cord is securely bound in place to prevent arcing and sparks caused by friction.

• Do not use plastic for battery encapsulation or electrical connections. Improper electrical connections can lead to overheating during battery usage.

• In case of battery leakage with electrolyte spilling onto the skin or clothes, immediately wash the affected area with running water. If electrolyte enters the eyes, mouth, nose, or any open body parts, rinse the eyes with plenty of water and seek immediate medical treatment to prevent serious injuries. It is strictly prohibited for any person or animal to swallow any part of the battery or its contents.

• If the cell emits a peculiar smell, heat, discoloration, deformation, or any abnormalities during use, storage, or charging, promptly remove the cell from the device or charger and discontinue its use.

• Disassembling the product without written consent from ExpertPower is strictly prohibited.

6.5. Disclaimer

If the product demand unit or user fails to comply with the instructions provided in this manual, ExpertPower will no longer be held responsible for any related liabilities, including product quality assurance and loss compensation. If the above-mentioned actions negatively impact ExpertPower's reputation, ExpertPower reserves the right to investigate the legal liability of the product demand unit.

7. Risk Warning

7.1. Warning Declaration

Warning

•The battery carries potential hazards, and it is important to exercise proper precautions when operating and maintaining the battery.
• Always use appropriate tools and protective equipment when handling the battery.
• Battery maintenance should only be carried out by professionals with expertise in batteries and proper safety training.
•Failure to adhere to these warnings may lead to various disasters.

7.2. Types of Hazards

The customer should be aware of the following potential hazards associated with the use and operation of batteries:

a) Operators may be at risk of injury from chemicals, electric shocks, or electric arcs during operation. While the human body reacts differently to direct current and alternating current, DC voltage higher than 50 V poses an equal level of seriousness as alternating current. Therefore, it is crucial for the customer to maintain a cautious posture during operation to avoid the risk of electric shock.

b) There is a chemical risk posed by the electrolyte present in the battery.

c) When operating batteries and selecting personal protective equipment, customers and their employees must consider these potential risks to prevent accidental short circuits, arcing, explosions, or thermal runaway.

8. Cell Drawing of LC32304

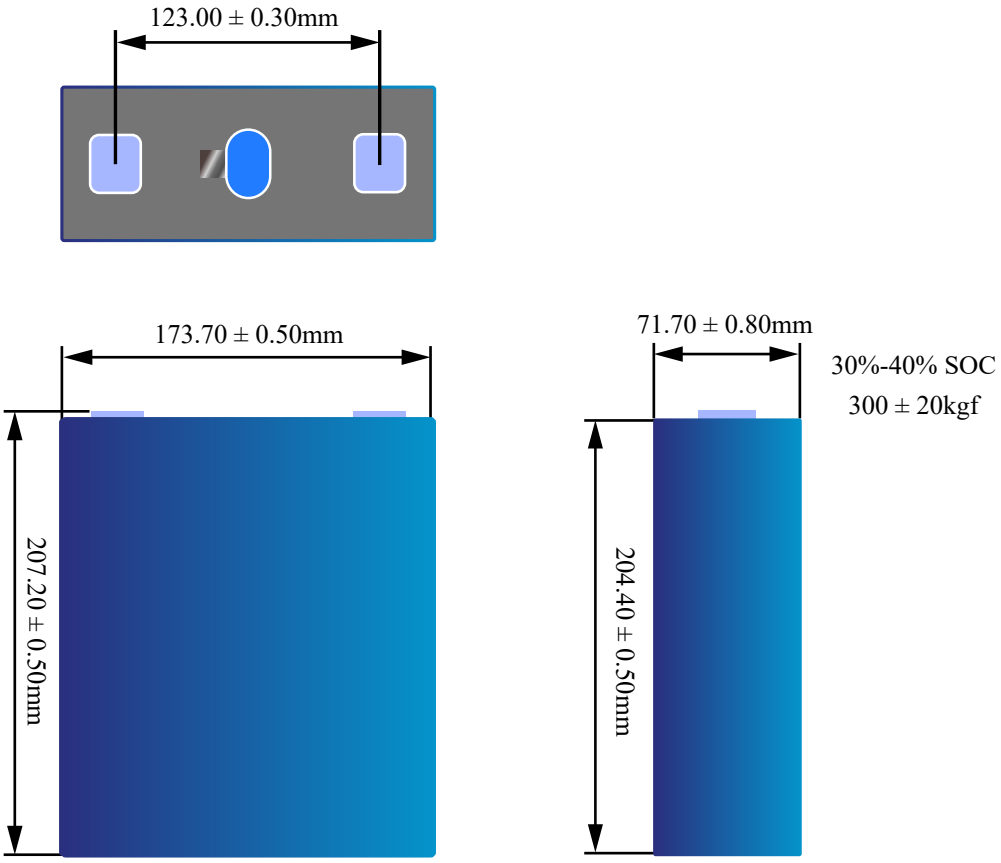


Fig.2 Cell Drawing of LC32304